

REMARKS

Rejections Under §102(b)

A. Claims 52-57, 60-65, 68, 72-77, 79-82, 85, 87, and 89

Claims 52-57, 60-65, 68, 72-77, 79-82, 85, 87, and 89 stand rejected under 35 U.S.C. §102(b) as being unpatentable over Williams *et al.*, U.S. Patent No. 5,779,159 ("Williams"). (Paper No. 20110408 at 2-6).

Williams discloses a fire fighting nozzle that includes peripheral channeling for an additive fluid. (See, e.g., Abstract; Col. 1, Ins. 32-34). The nozzle includes a barrel having an inlet end and a discharge end. "A stem is affixed within the barrel proximate the discharge end. A source of additive fluid is communicated to the barrel. A fluid passageway is defined along wall portions of the barrel, the defined passageway terminating at an outlet proximate the barrel discharge. The additive fluid is communicated to the peripheral passageway. The outlet may [include] an annular outlet or a plurality of outlets." (Col. 1, Ins. 59-66).

"In operation, a source of primary fire fighting fluid, such as water or water and foam concentrate or other liquid, is connected to the inlet end and supplied under pressure to the fire fighting nozzle barrel." (Col. 5, Ins. 54-57). A source of additive fluid is connected to another opening in the barrel wall. The opening in the wall of the barrel, which is provided as the inlet for the additive fluid connects with a peripheral passageway(s) in the nozzle along the barrel wall. (See, e.g., Col. 5, ln. 54 – Col. 6, ln. 14).

In making the rejection, the Examiner asserts that Williams shows an apparatus for generating a mist (Fig. 2A). (Paper No. 20110408 at 2). The Examiner further asserts that the Figure 2A apparatus comprises: "a housing (B) having a plurality of interior walls, at least one of the plurality of interior walls defining a passageway along a longitudinal center axis (PM), the passageway having a transport fluid inlet (W), a plenum (PM) adjacent to the transport fluid inlet, a portion (right side of O) adjacent to the plenum, and an outlet (left side of O), the at least one of the plurality of interior walls (PM, near O) being continuously tapered outwardly with respect to the axis along the portion and the plenum (PM) adjacent to the transport fluid inlet (W) being of different cross-sectional area than the transport fluid inlet at every point along the length of the plenum adjacent to the transport fluid inlet; a protrusion (S) with a solid interior located proximate the portion, the protrusion having an outer surface tapered outwardly with respect to the axis; a means for generating a mist substantially of a desired droplet size from a working fluid (F) with a transport fluid (W), the means including a transport nozzle (O) and a working nozzle (PO), the a [sic] transport nozzle being defined between the at least one of the plurality of interior walls tapered outwardly with respect to the axis along the portion, and the outer surface tapered outwardly of the protrusion (S); the working nozzle (PO) being defined by other of the plurality of interior walls of the housing, the working nozzle being coincident the transport nozzle so that a the [sic] working fluid communicated to and exiting the working nozzle and the transport fluid communicated to and exiting the transport nozzle contact for the first time and

mix; wherein the working nozzle is defined by a working nozzle outer surface facing inward toward the axis and a working nozzle inner surface facing outward away from the axis; wherein at least part of the working nozzle outer surface (X) converges toward the axis in a direction along the axis toward the outlet; and a working fluid inlet (F) disposed along the housing in communication with the working nozzle." (*Id.*).

It is respectfully submitted that for the reasons set forth below, the Examiner has not met his burden.

As is well settled, anticipation requires "identity of invention." *Glaverbel Societe Anonyme v. Northlake Mktg. & Supply*, 33 USPQ2d 1496, 1498 (Fed. Cir. 1995). Each and every element recited in a claim must be found in a single prior art reference and arranged as in the claim. *In re Marshall*, 198 USPQ 344, 346 (CCPA 1978); *Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir 1984).

Initially, we note that in the prior Office Action, the Examiner conceded that Williams does not disclose interior walls continuously tapered outwardly. In the Examiner's own words:

Williams et al. does not show the at least one of the plurality of interior walls being continuously tapered outwardly with respect to the axis along the portion and the plenum adjacent to the transport fluid inlet being of different cross-sectional area than the transport fluid inlet at every point along the length of the plenum adjacent to the transport fluid inlet; wherein at least part of the working nozzle outer surface converges toward the axis in a direction along the axis toward the outlet.

(Paper No. 20100715 at 3).

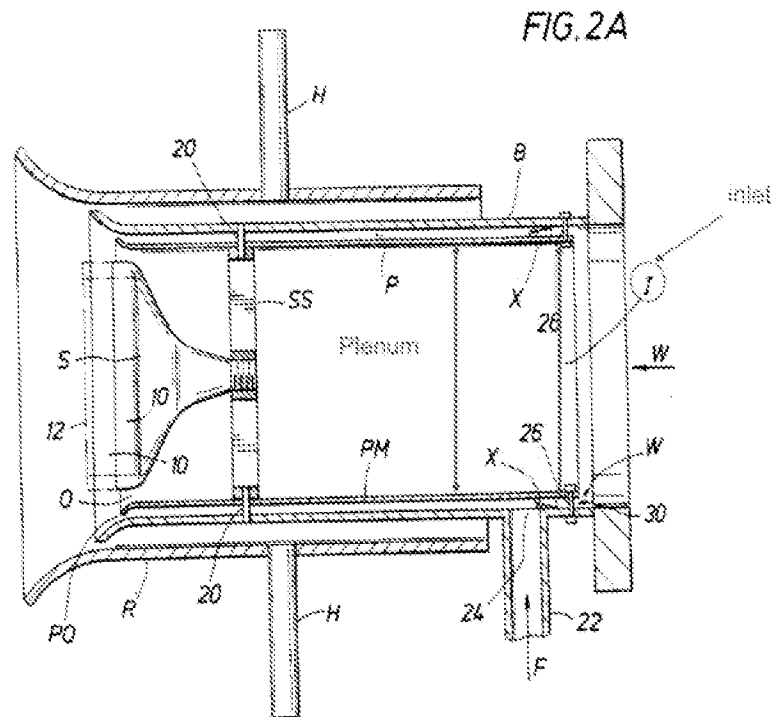
Indeed, the Examiner attempted to fill this acknowledged deficiency with Tanaka and failed as evidenced by the withdrawal of the previous rejection. While the previous rejection was based on Figure 1 and the present rejection is based on Figure 2A, we note that with respect to this particular element, Figures 1 and 2A/2B do not differ. And, no claim amendment has been made in the interim, so the claim scope has not changed. Thus, the Examiner's previous concession that Williams does not disclose interior walls continuously tapered outwardly stands. For this reason alone the rejection of claims 52 and 53 must be withdrawn.

We also note that the rejection continuously makes errors with respect to structural elements of Williams. For example:

- The rejection identifies a "transport fluid inlet (W)". But, a review of Williams Figure 2 confirms that "W" refers to "water" and "I" is the transport fluid inlet;
- The rejection identifies "PM" as both (1) "a passage way along a longitudinal center axis (PM)" and "a plenum (PM)". But, a review of Williams Figure 2 confirms that "PM" refers to a "sleeve" or "passageway defining means".

When an Examiner makes a mistake of fact in a rejection, the rejection cannot stand. See, e.g., *Ex parte Chane*, 2011 WL 4975870, *3-4 (B.P.A.I. October 14, 2011) (reversing an examiner's anticipation rejection because of factual errors). For this reason also the rejection of claims 52 and 53 must be withdrawn.

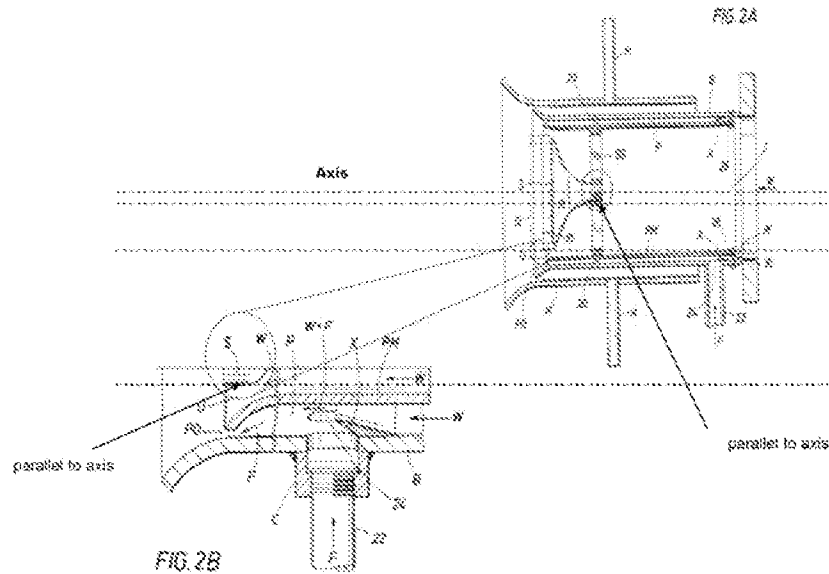
The rejection also overlooks/misinterprets clear structural distinctions between Williams Figure 2 and claim 52. For example, claim 52 recites that "the plenum adjacent to the transport fluid inlet being of different cross-sectional area than the transport fluid inlet at every point along the length of the plenum adjacent to the transport fluid inlet". Williams Figure 2A, as properly construed, shows that the transport fluid inlet (I) and the plenum are of the same cross-sectional area instead of "being of different cross-sectional area as recited in the claim." This is evident from an inspection of the Figure set forth below:



For this reason also, the rejection should be withdrawn.

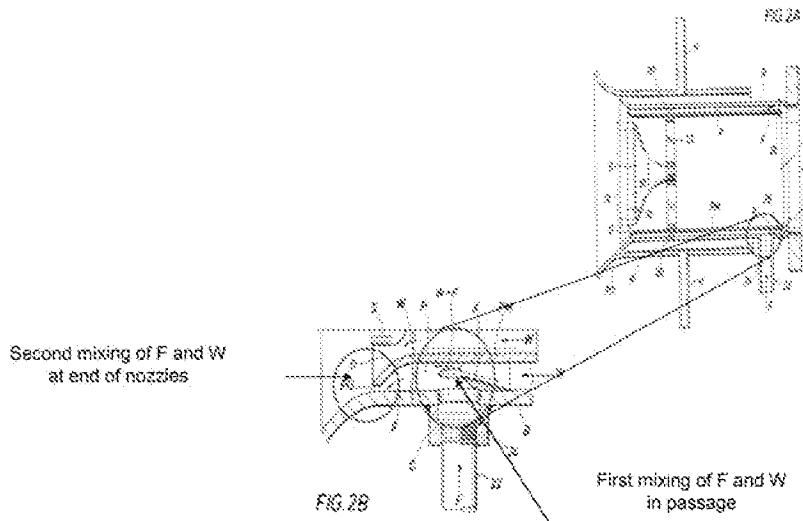
Claim 52 also recites that "the protrusion having an outer surface tapered outwardly with respect to the axis". Williams Figure 2A, as properly construed, shows that the protrusion (S) is not tapered outwardly with respect to

the axis. Indeed, as shown below, at least two sections of the protrusion (S) are parallel with respect the axis.



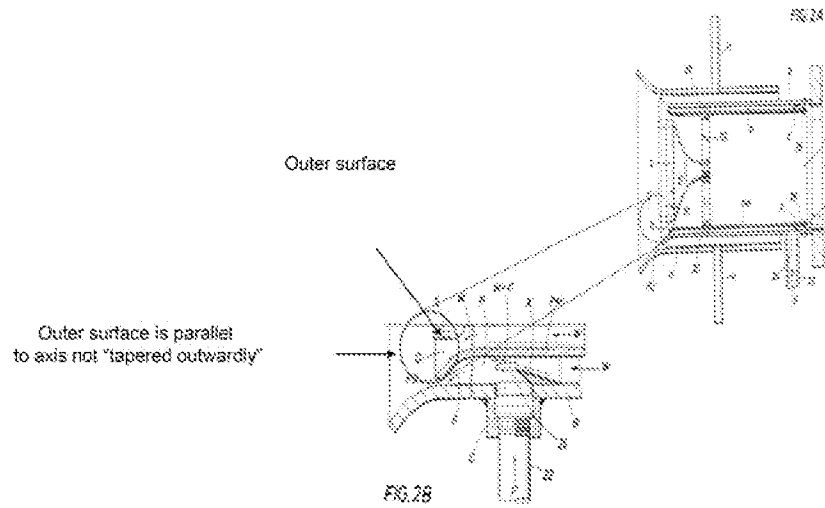
For this reason also, the rejection should be withdrawn.

Claim 52 also recites that "the working nozzle being coincident the transport nozzle so that the working fluid communicated to and exiting the working nozzle and the transport fluid communicated to and exiting the transport nozzle contact for the first time and mix". Williams Figure 2A, as properly construed, shows that the working fluid (F), e.g., foam concentrate, and the transport fluid (W), e.g., water, mix in passageway P for the first time. Indeed, as shown below, a second – not a first – mixing of the working and transport fluids occurs as they exit the respective nozzles.



For this reason also, the rejection should be withdrawn.

Claim 52 also recites that “the transport nozzle being defined between the at least one of the plurality of interior walls tapered outwardly with respect to the axis along the portion, and the outer surface tapered outwardly of the protrusion”. Williams Figure 2A, as properly construed, shows that the outer surface of the transport nozzle is not tapered outwardly of the protrusion (S). Indeed, as shown below “the outer surface” is not tapered at all.



For this reason also, the rejection should be withdrawn.

As demonstrated above, the rejection is rife with misinterpretations of Williams. In addition, there are numerous structural differences - including some previously conceded by the Examiner - between Williams and the rejected claims. Thus, for at least the reasons identified above, the rejection of claims 52 and 53 must be withdrawn.

In making the rejection with respect to claim 54, the Examiner asserted that Williams shows an apparatus for generating a mist (Fig. 2a), the apparatus having an apparatus axis, the apparatus comprising: a housing (B), and a means for suppressing combustion with a mist, the means including: a first fluid passage (PO) formed in the housing having a first fluid inlet (F) and a first fluid outlet (PO); the first fluid passage defining a working nozzle; the first fluid passage comprising a first annular portion concentric with the apparatus axis, the

first annular portion having a first outer surface facing inward toward the apparatus and a first inner surface facing outward away from the apparatus axis; wherein at least part of the first outer surface (X) converges toward the apparatus axis in a direction toward the first fluid outlet; a second fluid passage (O) formed in the housing having a second fluid inlet (W) and a second fluid outlet (O); a protrusion (S) located in the second fluid passage to define an annular transport nozzle with a second inner surface facing outward away from the apparatus axis and a second outer surface facing inward toward the apparatus axis, that are both concentric with the apparatus axis and substantially frusto-conical in shape, and wherein the second inner surface and the second outer surface both diverge away from the apparatus axis in the direction toward the second fluid outlet (O); wherein the first fluid passage and second fluid passage are separate before the first fluid outlet and the second fluid outlet." (Paper No. 20110408 at 3-4).

Initially, we note that in the prior Office Action, the Examiner conceded that Williams does not disclose interior walls continuously tapered outwardly. In the Examiner's own words:

Williams et al does not teach wherein at least part of the first outer surface converges toward the apparatus axis in a direction toward the first fluid outlet.

(Paper No. 20100715 at 5).

Indeed, the Examiner attempted to fill this acknowledged deficiency with Tanaka and failed as evidenced by the withdrawal of the previous rejection. While the previous rejection was based on Figure 1 and the present rejection is

based on Figure 2A, we note that with respect to this particular element, Figures 1 and 2A/2B do not differ. And, no claim amendment has been made in the interim, so the claim scope has not changed. Thus, the Examiner's previous concession that Williams "does not teach wherein at least part of the first outer surface converges toward the apparatus axis in a direction toward the first fluid outlet" stands. For this reason alone the rejection of claims 54-57, and 60-65, 68, and 72 must be withdrawn.

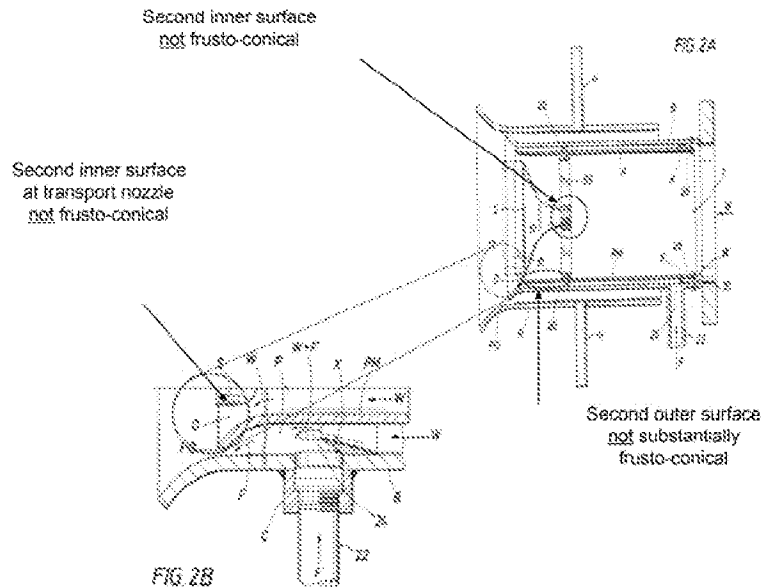
We also note that the rejection continuously makes errors with respect to structural elements of Williams. For example:

- The rejection identifies "O" as three different elements: "a transport nozzle" (*Id.* at p. 3), "a second fluid passage (O)" and "a second fluid outlet (O)". (*Id.* at p. 4). But a review of Williams Figure 2 confirms that "O" is the discharge end of the barrel.
- The rejection identifies "PO" as "a first fluid passage" and "a first fluid outlet". But a review of Williams Figure 2 confirms that "PO" is the discharge outlet of passageway P.
- The rejection identifies a "second fluid inlet (W)". But, a review of Williams Figure 2 confirms that "W" refers to "water" and "I" is the second fluid inlet;

When an Examiner makes a mistake of fact in a rejection, the rejection cannot stand. See, *e.g.*, *Chane*, 2011 WL 4975870 at (reversing an examiner's anticipation rejection because of factual errors). For this reason also the rejection of claims 54-57, and 60-65, 68, and 72 must be withdrawn.

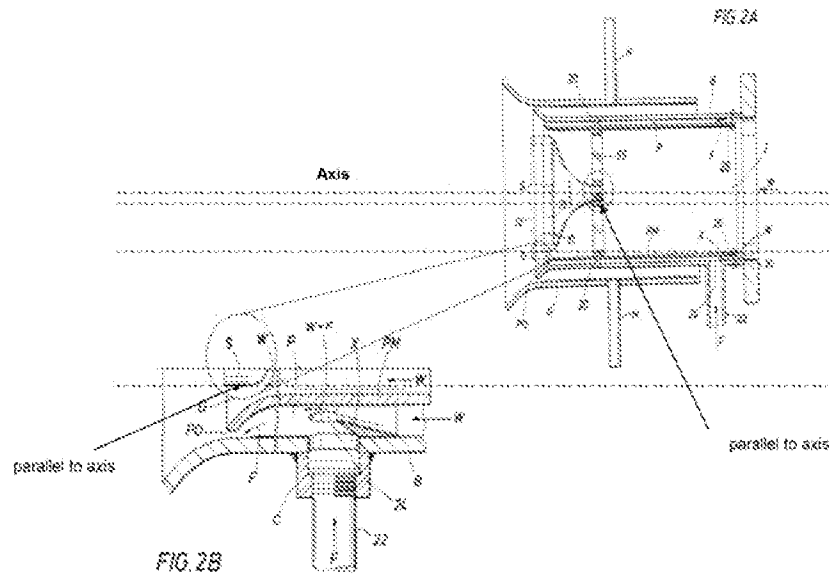
The rejection also overlooks/misinterprets clear structural distinctions between Williams Figure 2 and claim 54. For example, claim 54

recites that "both [the second inner surface and the second outer surface of the transport nozzle] are concentric with the apparatus axis and substantially frusto-conical in shape". Williams Figure 2A, as properly construed, shows that, neither the second inner surface nor the second outer surface are substantially frusto-conical. This is evident from an inspection of Figure set forth below:



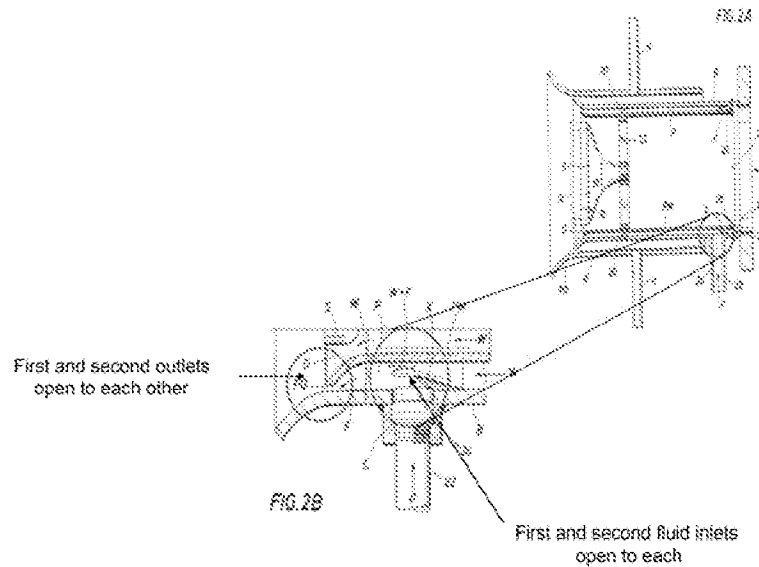
For this reason also, the rejection should be withdrawn.

Claim 54 also recites that "the second inner surface and the second outer surface both diverge away from the apparatus axis in the direction toward the second fluid outlet". Williams Figure 2A, as properly construed, shows that second inner surface does not diverge away from the apparatus. Indeed, as shown below, at least two sections of the second inner surface are parallel with respect the axis.



For this reason also, the rejection should be withdrawn.

Claim 54 also recites that "wherein the first fluid passage and second fluid passage are separate before the first fluid outlet and the second fluid outlet". Williams Figure 2A, as properly construed, shows that the working fluid (F), e.g., foam concentrate, and the transport fluid (W), e.g., water, mix in passageway P for the first time because the first fluid passage and the second fluid passage are in fluid communication with each other at both their respective inlets and outlets. Indeed, as shown below, water W from the first fluid inlet is shown entering the second fluid inlet where it combines with the working fluid before exiting the second fluid outlet.



For this reason also, the rejection should be withdrawn.

As demonstrated above, the rejection is rife with misinterpretations of Williams. In addition, there are numerous structural differences - including some previously conceded by the Examiner - between Williams and the rejected claims. Thus, for at least the reasons identified above, the rejection of claims 54-57, 60-65, 68, and 72 must be withdrawn.

In making the rejection with respect to claim 73, the Examiner asserted that Williams "shows an apparatus for generating a mist (Fig. 2A), the apparatus having an apparatus axis and an outlet end, the apparatus comprising: a first fluid passage (P) having a first fluid inlet (F) and a first fluid outlet (PO); the first fluid passage defining a first nozzle; the first fluid outlet being annular and concentric with the apparatus axis, the first fluid passage comprising a first annular portion (P) concentric with the apparatus axis, the first annular portion

having a first outer surface facing inward toward the apparatus axis and a first inner surface facing outward away from the apparatus axis; wherein at least part of the first outer surface (X) converges toward the apparatus axis in a direction toward the outlet end; a second fluid passage (PM) having a second fluid inlet (W) and a second fluid outlet (O); the second fluid passage defining a second nozzle; the second fluid outlet being annular and concentric with the apparatus axis, the second fluid passage comprising a second annular portion concentric with the apparatus axis, the second annular portion having a second outer surface facing inward toward the apparatus axis and a second inner surface facing outward away from the apparatus axis; wherein at least part of the second outer surface (O) diverges away from the apparatus axis in a direction toward the outlet end; and wherein at least part of the second inner surface (S) diverges away from the apparatus axis in a direction toward the outlet end; and wherein the second fluid outlet is located between the first fluid outlet (PO) and the apparatus axis.” (Paper No. 20110408 at 5-6).

Initially, we note that in the prior Office Action, the Examiner conceded that Williams does not disclose interior walls continuously tapered outwardly. In the Examiner’s own words:

Williams et al does not teach wherein at least part of the first outer surface converges toward the apparatus axis in a direction toward the first fluid outlet.

(Paper No. 20100715 at 8).

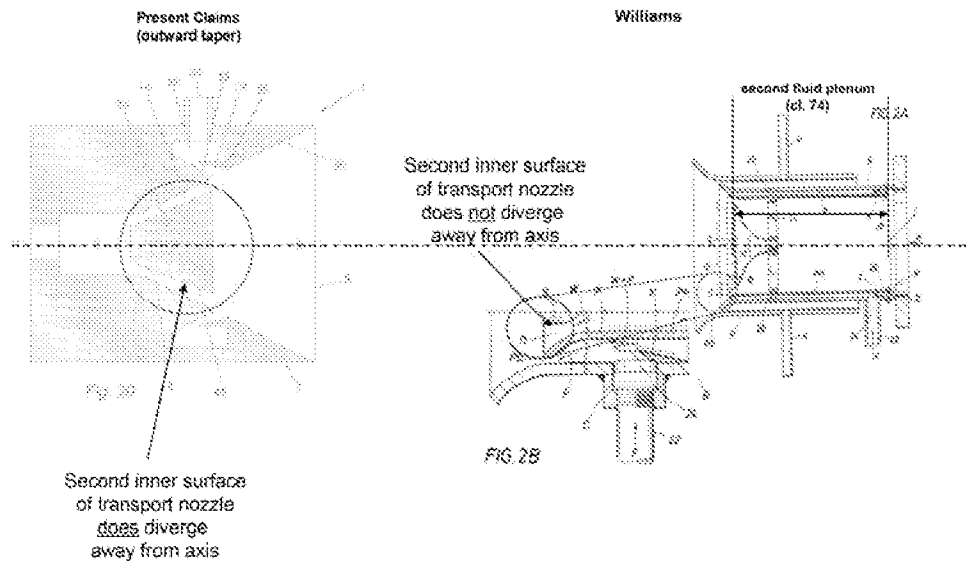
Indeed, the Examiner attempted to fill this acknowledged deficiency with Tanaka and failed as evidenced by the withdrawal of the previous rejection. While the previous rejection was based on Figure 1 and the present rejection is based on Figure 2A, we note that with respect to this particular element, Figures 1 and 2A/2B do not differ. And, no claim amendment has been made in the interim, so the claim scope has not changed. Thus, the Examiner's previous concession that Williams does not teach wherein "at least part of the first outer surface converges toward the apparatus axis in a direction toward the first fluid outlet" stands. For this reason alone the rejection of claims 73-77, 79-82, 85, 87, and 89 must be withdrawn.

We also note that the rejection continuously makes errors with respect to structural elements of Williams. For example:

- The rejection identifies "P" as "a first fluid passage" and "a first angular portion". But a review of Williams Figure 2 confirms that "P" is the passageway.
- The rejection identifies a "second fluid inlet (W)". But, a review of Williams Figure 2 confirms that "W" refers to "water" and "I" is the second fluid inlet.
- The rejection identifies "O" as the "second fluid outlet" and the "second outer surface". But, a review of Williams Figure 2 confirms that "O" refers to the discharge end of the barrel.

When an Examiner makes a mistake of fact in a rejection, the rejection cannot stand. See, e.g., *Chane*, 2011 WL 4975870 at *3-4 (reversing an examiner's anticipation rejection because of factual errors). For this reason also the rejection of claims 73-77, 79-82, 85, 87, and 89 must be withdrawn.

The rejection also overlooks/misinterprets clear structural distinctions between Williams Figure 2 and claim 73. For example, claim 73 recites that the second nozzle is defined by “a second fluid inlet and a second fluid outlet”. This second nozzle corresponds to the area inscribed by the red circles of the figure below. The second nozzle does not include the second fluid plenum, which is added in claim 74. As is readily seen, the structure defined by the second nozzle is limited and does not embrace the entirety of the stem (S). That part of the stem (S) that is defined by the second nozzle, namely the “second inner surface” is parallel to the axis and does not, as recited by claim 73, “at least in part ... diverge away from the apparatus axis”.



The above is a reproduction of Figures 2A/B of Williams (right panel) relied on by the Examiner in a side-by-side comparison of an embodiment (Figure 20) within the scope of, e.g., claim 73.

For this reason also, the rejection should be withdrawn.

As demonstrated above, the rejection is rife with misinterpretations of Williams. In addition, there are numerous structural differences - including some previously conceded by the Examiner - between Williams and the rejected claims. Thus, for at least the reasons identified above, the rejection of 73-77, 79-82, 85, 87, and 89 must be withdrawn.

B. Claims 66, 67, 69, 83, 84, and 86

Claims 66, 67, 69, 83, 84, and 86 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Williams. (Paper No. 20110408 at 6-7).

It is well settled that the Examiner bears the burden to set forth a *prima facie* case of unpatentability. *In re Glaug*, 62 USPQ2d 1151, 1152 (Fed. Cir. 2002); *In re Oetiker*, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); and *In re Piasecki*, 223 USPQ 785, 788 (Fed. Cir. 1984). If the PTO fails to meet its burden, then the applicant is entitled to a patent. *In re Glaug*, 62 USPQ2d at 1152.

One way in which an Examiner's burden is not met is when the Examiner misconstrues a document cited in a rejection. *See, e.g., Ex parte Jones*, 1994 WL 1687158, *1-*2 (B.P.A.I. 1994) (reversing a rejection under §103 because the Examiner misconstrued the primary reference, Cramer) and *Ex parte Ottesen*, 2009 WL 3030307, *6 (B.P.A.I. 2009) (reversing a rejection under §103(a) because the Examiner misconstrued the secondary reference, Law).

In making the rejection, the Examiner alleges that Williams discloses the claimed invention except for the particular mechanical elements recited in the rejected claims.

Williams has been summarized previously. (*See*, Sect. A, *supra*).

Initially, we note that claims 66, 67, 69, 83, 84, and 86 depend from claims 54 and 73, which claim(s) were rejected over Williams in the previous rejection. (*See*, Paper No. 20110408 at 2-6). Thus, we incorporate by reference all of our arguments traversing the previous rejection here. (*See*, Sect. A, *supra*). In this regard, we note that the Examiner has identified no disclosure or suggestion from any other source that would remedy each of the factual deficiencies noted for claims 54 and 73 in Sect. A, *supra*, such as, e.g., the deficiency in Williams as to the lack of a disclosure of an apparatus that has at least one of the plurality of interior walls being continuously "tapered outwardly" (claim 54) or "at least in part ... diverge away from the apparatus axis" (Claim 73). Because the rejection fails to address the noted deficiencies in Williams with anything, the Examiner's legal conclusion of unpatentability based on obviousness must fail. *See, e.g., Ex parte Jones*, 1994 WL 1687158, *1-*2 (B.P.A.I. 1994) and *Ex parte Ottesen*, 2009 WL 3030307, *6 (B.P.A.I. 2009). Accordingly, the rejection should be withdrawn for these reasons alone.

We also note that because the rejection carries forward all of the misconstructions of Williams that were identified above in the prior §102(b) section, the present rejection under §103(a) must fail. *See, e.g., Jones*, 1994 WL 1687158 at *1-*2 and *Ottesen*, 2009 WL 3030307 at *6.

For the reasons set forth above, withdrawal of the rejections and allowance of the claims is respectfully requested. If the Examiner has any questions regarding this paper, please contact the undersigned.

C. Claims 71 and 88

Claims 71 and 88 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Williams in view of Pennamen *et al.*, U.S. Patent No. 5,810,252 ("Pennamen"). (Paper No. 20110408 at 7-8).

Williams has been summarized previously. (See, Sect. A, *supra*). Pennamen discloses methods and apparatus for atomizing a heavy, highly viscous liquid, such as, *e.g.*, an oil, to achieve good combustion of the oil. The Pennamen apparatus "contains a head with a plurality of primary channels, the atomization orifices of which are regularly distributed on the head of the device in the form of a circular ring or in the form of two coaxial circular rings." (Col. 3, Ins. 25-30). According to Pennamen, the apparatus is able to achieve atomization of, *e.g.*, oil, into "fine droplets of very small diameter, of the order of 100 thousandths of a millimeter." (Abstract; Col. 1, Ins. 25-27). Further according to Pennamen, to obtain droplets of this size, the viscosity of the product must be less than 20 mm²/s at the atomization temperature. (Col. 1, Ins. 27-30).

When Pennamen was filed, for highly viscous liquids, such as oils, with a viscosity of 4,000 mm²/s at 100°C, the atomization temperature had to be high – between about 200°-230°C – in order to reduce the viscosity of the product to about 20 mm²/s to achieve good atomization by conventional methods. (*Id.* at 30-34). Pennamen provides two examples. (Col. 5, ln. 1 – Col. 6, ln. 2). In both examples, Pennamen's apparatus is able to atomize highly viscous liquids, such as oils, at considerably lower temperatures compared to

conventional methods. (*Id.*). For the specified conditions, including an oil viscosity of 200 mm²/s at 20°C, the apparatus was able to atomize the highly viscous fluid into droplets having a Sauter mean diameter at the exit of “35 microns, with 90% of the droplets having a diameter of less than 120 microns and 99% of them having a diameter of less than 290 microns.” (Col. 5, lns. 25-28; Col. 5, ln. 66 – Col. 6, ln. 2).

In making the rejection, the Examiner asserted that Williams “teaches a primary fluid and an additive fluid as well as that the working fluid is water.” (Paper No. 20110408 at 7). The Examiner acknowledged, however, that Williams “does not teach a steam generator or that the transport fluid is steam. To fill this acknowledged gap, the Examiner relied on Pennamen as teaching steam, “which would inherently come from something generating the steam, for atomization.” (*Id.* at 8). The Examiner then summarily concluded that “it would have been obvious to one of ordinary skill in the art to make the primary fluid of Williams et al. steam as taught by Pennamen et al. to aide in atomization (col. 2, 52-55).” (*Id.*).

It is well settled that the Examiner bears the burden to set forth a *prima facie* case of unpatentability. *In re Glaug*, 62 USPQ2d 1151, 1152 (Fed. Cir. 2002); *In re Oetiker*, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); and *In re Piasecki*, 223 USPQ 785, 788 (Fed. Cir. 1984). If the PTO fails to meet its burden, then the applicant is entitled to a patent. *In re Glaug*, 62 USPQ2d at 1152.

One way in which an Examiner's burden is not met is when the Examiner misconstrues a document cited in a rejection. See, e.g., *Ex parte Jones*, 1994 WL 1687158, *1-*2 (B.P.A.I. 1994) (reversing a rejection under §103 because the Examiner misconstrued the primary reference, Cramer) and *Ex parte Ottesen*, 2009 WL 3030307, *6 (B.P.A.I. 2009) (reversing a rejection under §103(a) because the Examiner misconstrued the secondary reference, Law).

Initially, we note that claims 71 and 88 depend from claims 54 and 73, which claim(s) were rejected over Williams in the previous rejection. (See, Paper No. 20110408 at 2-6). Thus, we incorporate by reference all of our arguments traversing the previous rejection here. (See, Sect. A, *supra*). In this regard, we note that the Examiner has identified no disclosure or suggestion in Pennamen that would remedy each of the factual deficiencies noted for claims 54 and 73 in Sect. A, *supra*, such as, e.g., the deficiency in Williams as to the lack of a disclosure of an apparatus that has at least one of the plurality of interior walls being continuously "tapered outwardly" (claim 54) or "at least in part ... diverge away from the apparatus axis" (Claim 73). Because the rejection fails to address the noted deficiencies in Williams with any suggestion or disclosure from Pennamen, the Examiner's legal conclusion of unpatentability based on obviousness must fail. See, e.g., *Ex parte Jones*, 1994 WL 1687158, *1-*2 (B.P.A.I. 1994) and *Ex parte Ottesen*, 2009 WL 3030307, *6 (B.P.A.I. 2009). Accordingly, for this reason alone, the rejection should be withdrawn.

We also note that because the rejection carries forward all of the misconstructions of Williams that were identified above in the prior §102(b)

section, the present rejection under §103(a) must fail. See, e.g., *Jones*, 1994 WL 1687158 at *1-*2 and *Offesen*, 2009 WL 3030307 at *6. For this reason also, the rejection should be withdrawn.

We further note that the rejection provide no motivation to combine Williams with Pennamen in the manner suggested by the Examiner. Williams is primarily concerned with methods and apparatuses for fighting fires, and more particularly for mixing a liquid and foam and delivering it to a fire. Pennamen is directed primarily to methods for atomizing heavy, highly viscous oils. The rejection identifies no deficiencies in Williams that would suggest or motivate one skilled in the art to look anywhere, let alone Pennamen. Williams already disclosed a method for mixing fluids W and F and the rejection provides no articulated reasoning with rational underpinnings as to why one skilled in the art would be motivated to modify Williams, let alone look to Pennamen to do so. As is well settled, when a motivation to combine prior art teachings is unsupported by articulated reasoning with rational underpinnings, it must fail. See, e.g., *Ex parte Koepnick*, 2011 WL 1661490, *3 (B.P.A.I. 2011) (reversing a rejection under §103(a) because the Examiner did not properly establish a motivation for the proposed combination); and *Ex parte Prosise*, 2011 WL 3566837, *3 (B.P.A.I. 2011) (reversing a rejection under §103(a) because there was no nexus between the elements borrowed from the secondary reference and the specific use recited in the primary reference). For this reason also, the rejection should be withdrawn.

For the reasons set forth above, withdrawal of the rejections and allowance of the claims is respectfully requested. If the Examiner has any questions regarding this paper, please contact the undersigned.

I hereby certify that this correspondence is being transmitted in accordance with 37 CFR §§1.6(a)(4) and 1.8 via the U.S. Patent and Trademark Office (USPTO) electronic filing system (EFS-Web) to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 26, 2011.


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